

Monochoria vaginalis var. *angustifolia*, a new variety of the Pontederiaceae from Thailand

^{1,2}WANG Guang-Xi* ²LI Wei ³WAN Xiao-Chun ¹Misako ITO

¹(Laboratory of Weed Science, Graduate School of Agriculture, Kyoto University, Kyoto 606-8502, Japan)

²(Laboratory of Aquatic Plant Biology, Wuhan Institute of Botany, the Chinese Academy of Sciences, Wuhan 430074, China)

³(Laboratory of Conservative Ecology, Graduate School of Agricultural and Life Sciences, the University of Tokyo, Tokyo 113-8657, Japan)

Abstract A new variety of *Monochoria* C. Presl from Thailand, *M. vaginalis* (N. L. Burman) Kunth var. *angustifolia* G. X. Wang, is described. This variety can be distinguished from the typical one, *M. vaginalis* var. *vaginalis*, by having mature leaves narrowly lanceolate, 3–7 × 0.3–2.0 cm with the basal lobes up to 0.2 cm long, apex acute or acuminate, and 3–7-flowered raceme. In *M. vaginalis* var. *vaginalis* the mature leaves are elliptic to cordate, 4–9 × 2–8 cm, the basal lobes up to 2 cm long, and raceme 6–10-flowered.

Key words *Monochoria*, Pontederiaceae, *M. vaginalis* var. *angustifolia*, new variety, Thailand.

The genus *Monochoria* C. Presl (Pontederiaceae) consists of nine species of conspicuous-flowered, emergent, rhizomatous or stoloniferous aquatic plants (Cook, 1989; Wang & Nagamasu, 1994), five from Asia, two from Africa (Verdcourt, 1961) and two from Australia (Aston, 1985). Two Asian species, *M. vaginalis* (N. L. Burman) Kunth and *M. korsakowii* Regel & Maack, are weeds in rice-fields (Wang et al., 1998, 2003) and the former has extended its range to Europe (Ukraine (Laktionov, 1972) and Italy (Vuille, 1985)), America (California (Mason, 1957; Barrett & Seaman, 1980)), the Hawaii Islands (Oahu (Degener & Degener, 1960)) and Australia (Wang et al., unpubl. data). This paper describes a new variety of *Monochoria* collected from Thailand.

Monochoria vaginalis (N. L. Burman) Kunth var. ***angustifolia*** G. X. Wang, var. nov. Figs. 1, 2

A var. *vaginalis* recedit foliis anguste lanceolatis, 3–7 cm longis, 0.3–2.0 cm latis, apice acutis vel acuminatis, racemis 3–7-floris.

Thailand. Mahasarakarm, Koksung District, in a marshy place, 1984-09-18, N. Fukuoka T-36166 (holotype, here designated, KYO); Krungtep, Phra Nakhon, north of Bangkok, 1965-11-14, N. Tagawa et al., T280 (KYO, BKF); Si Saket, near Kantharalak, 14°53' N, 104°26' E, on the edge of secondary tropical seasonal rain forest along road, partly swampy, alt. ca. 130 m, 1984-10-08, G. Murata et al., T-49700 (KYO); Ubon Rachathani, Game research area



Fig. 1. Photograph of the holotype of *Monochoria vaginalis* var. *angustifolia* G. X. Wang, N. Fukuoka T-36166 (KYO).

between Nong Khon and Nam Yeun, ca. 90 km SSE of Ubon Rachathani City, $14^{\circ}37' N$, $105^{\circ}12' E$, on the edge of secondary tropical seasonal rain forest along river, alt. ca. 180 m, 1984-10-11, G. Murata et al., T-52165 (KYO).

Monochoria vaginalis var. *angustifolia* can be distinguished from the typical one by having mature leaves narrowly lanceolate, $3-7 \times 0.3-2.0$ cm with the basal lobes up to 0.2 cm long, apex acute or acuminate, and 3-7-flowered raceme. Examination of herbarium specimens and

transplant experiment have shown that the shape of the leaves of the new variety is stable (Fig. 2: A, B).

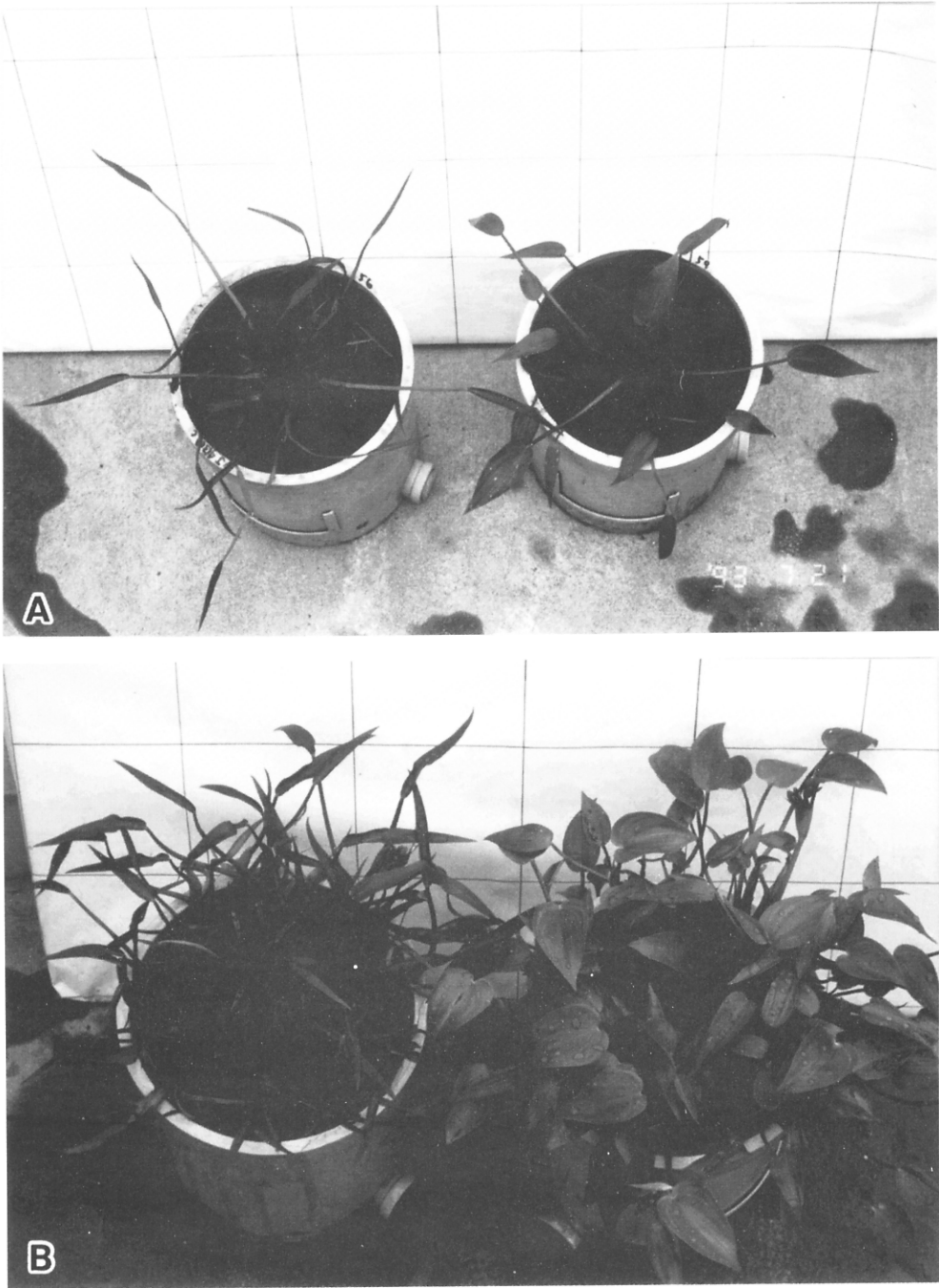


Fig. 2. *Monochoria vaginalis* var. *angustifolia* G. X. Wang (left) and the typical variety, *M. vaginalis* var. *vaginalis* (right) 40 days after sowing (A) and at flowering period (B).

Acknowledgements: We express our appreciation to Dr. Christopher D. K. Cook of Institut für systematische Botanik, Universität Zürich and Dr. H. Nagamasu of Kyoto University for valuable suggestions. The authors are also grateful to the keepers of the consulted herbaria for making their collections available.

References

- Aston H I. 1985. *Monochoria cyanea* and *M. australasica* (Pontederiaceae) in Australia. *Muelleria*. 6 (1–2): 51–57.
- Barrett S C H, Seaman D E. 1980. The weed flora of Californian rice fields. *Aquatic Botany* 9: 351–376.
- Cook C D K. 1989. A revision of the genus *Monochoria*. In: Tan K, Mill R R, Elias T S eds. *Plant Taxonomy, Phytogeography and Related Subjects*. The Davis & Hedge Festschrift. Edinburgh: Edinburgh University Press. 149–184.
- Degener O, Degener I. 1960. Family 63. Pontederiaceae, Genus *Monochoria*. *Flora Hawaiiensis*, Book 6. Honolulu.
- Laktionov B I. 1972. Novyr dlya flory Ukrainy vid *Monochoria korsakowii* Regel & Maack. *Botanicheskiĭ Zhurnal* (Moscow & Leningrad) 57: 1332–1333.
- Mason H L. 1957. A Flora of the Marshes of California. Berkeley and Los Angeles: University of California Press.
- Verdcourt B. 1961. The genus *Monochoria* Presl (Pontederiaceae) in Africa. *Kirkia* 1: 80–83.
- Vuille F-L. 1985. *Monochoria korsakowii* Regel & Maack (Pontederiaceae): a new plant to the rice fields of N. Italy. *Botanica Helvetica* 95: 323–324.
- Wang G-X, Nagamasu H. 1994. A new species of *Monochoria* (Pontederiaceae) from Hainan, China. *Acta Phytotaxonomica et Geobotanica* 45: 41–44.
- Wang G-X, Yamasue Y, Itoh K, Kusanagi T. 1998. Out-crossing rates as affected by pollinators and the heterozygote advantage of *Monochoria korsakowii*. *Aquatic Botany* 62: 135–143.
- Wang G-X, Watanabe H, Uchino A, Zhou J, Itoh K. 2003. Inheritance of sulfonyleurea resistance in paddy weed, *Monochoria korsakowii*. *Journal of Pesticide Science* 28: 212–214.

泰国雨久花属(雨久花科)一新变种——窄叶鸭舌草

^{1,2}汪光熙* ²李伟 ³万小春 ¹伊藤操子

¹(京都大学农学研究科杂草学研究室 日本京都 606-8502)

²(中国科学院武汉植物研究所水生植物生物学实验室 武汉 430074)

³(东京大学农学生命科学研究科保全生态学研究室 日本东京 113-8657)

摘要 描述了泰国雨久花属 *Monochoria* C. Presl 一新变种: 窄叶鸭舌草 *M. vaginalis* var. *angustifolia* G. X. Wang. 该新变种与原变种鸭舌草 *M. vaginalis* var. *vaginalis* 都具有类似的总状花序, 但前者的叶片为窄披针形, 3–7×0.3–2.0 cm, 叶片宽长比在 0.1–0.4 之间, 叶基部裂片最长不超过 2 mm, 总状花序具花 3–7 朵, 而原变种鸭舌草的叶片较宽, 为卵心形或心形, 4–9×2–8 cm, 叶片宽长比在 0.5–0.95 之间, 叶基部裂片最长可达到 2 cm, 总状花序具花 6–10 朵。二者有较明显的差异。

关键词 雨久花属; 雨久花科; 窄叶鸭舌草; 新变种; 泰国